

A NEW SPECIES OF NEOTROPICAL SEED WEEVIL AFFECTING
PIGEON PEAS, WITH NOTES ON TWO CLOSELY RELATED SPECIES
(COLEOPTERA: BRUCHIDAE: BRUCHINAE)

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ABSTRACT—A new species of bruchid, *Acanthoscelides zeteki*, destructive to pigeon peas (*Cajanus cajan* (L.) Millsp.), is described from Mexico, Central America, northern South America and the West Indies; comparative characteristics of two closely related species, *A. ochraceicolor* (Pic) and *A. distinguendus* (Horn), are given. New Synonymy noted: *A. armitagei* (Pic) (= *A. obreptus* Bridwell).

A common and potentially destructive bruchid pest of stored pigeon peas, *Cajanus cajan* (L.) Millsp. (*C. flavus* DC., *C. indicus* Spreng., auct.), in Panama and adjacent areas has been identified for several years as *Acanthoscelides armitagei* (Pic) following J. C. Bridwell's identifications in the U. S. National Museum collection.

Through the kindness of Mme. A. Bons of the Muséum National d'Histoire Naturelle in Paris, I have been allowed to examine the presumed type (lectotype, see below) of *A. armitagei* and a series of 7 additional specimens placed with it in the Pic collection. The type and 7 specimens are representative of 2 genera including 5 species entities, none of which is the Panamanian species in pigeon peas. Furthermore, the type of *A. armitagei* is identical to the lectotype of *A. obreptus* Bridwell and becomes a senior synonym of that species. I have not been able to assign the pigeon pea bruchid to any described species, therefore I here describe it as new and name it after James Zetek, the collector of the type series.

Acanthoscelides zeteki, n. sp.

Measurements.—Length, 3.0–3.25 mm.; width, 2.0 mm.

Color.—Integument including legs and antennae evenly red; vestiture of golden and gray setae in typical mottled *Acanthoscelides* pattern (fig. 6), middle of third interval of each elytron with elongate gray spot delimited anteriorly and posteriorly by rounded golden brown spots, intervals 5 and 7 gray at apices, 8 and 9 with elongated gray spots; pygidium with golden vestiture evenly distributed except for indistinct median condensation.

Head very finely punctate, densely covered with yellowish hairs converging toward distinct frontal carina extending from elongated frontal fovea to clypeolabral suture; antenna not strongly serrate (fig. 7), segments 4–10 flattened, expanded eccentrically. *Pronotum* subconical, lateral margins slightly arcuate; disk evenly convex; lateral marginal carinae obsolete; front coxae separated only

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at their bases by acutely triangular prosternum; front and middle legs normal; hind femur expanded (fig. 8), about as wide as coxa, ventral margin with 1 long tooth and 1 or 2 shorter denticles beyond it; hind tibia with mucro 0.6 as long as width of tibia at apex, external spine at apex 0.5 as long as mucro. *Elytra* with intervals of nearly equal width in basal two-thirds; striae well-marked but not deep, striae 3 and 4 each with deep pit at extreme base which usually bears a blunt denticle on anterior rim. Scutellum quadrate, bidentate at apex. Pygidium finely punctate. Male genitalia (figs. 4 and 5) with median lobe flattened, slightly expanded apically; ventral valve broad, evenly rounded except for median marginal tubercle; internal sac with fine spicules for more than one-half its length, a pair of curved spines toward apex, a denticulate sleeve-like gonopore sclerite and a helmet-shaped apical closure valve. Lateral lobes cleft nearly to base, slightly bowed medially, flattened and expanded apically.

HOLOTYPE.—♂, Panama, CANAL ZONE: Barro Colorado Is., Apr. 13, 1927, in seeds *Cajanus indicus* (*sic.*), J. Zetek, coll. USNM 69238.

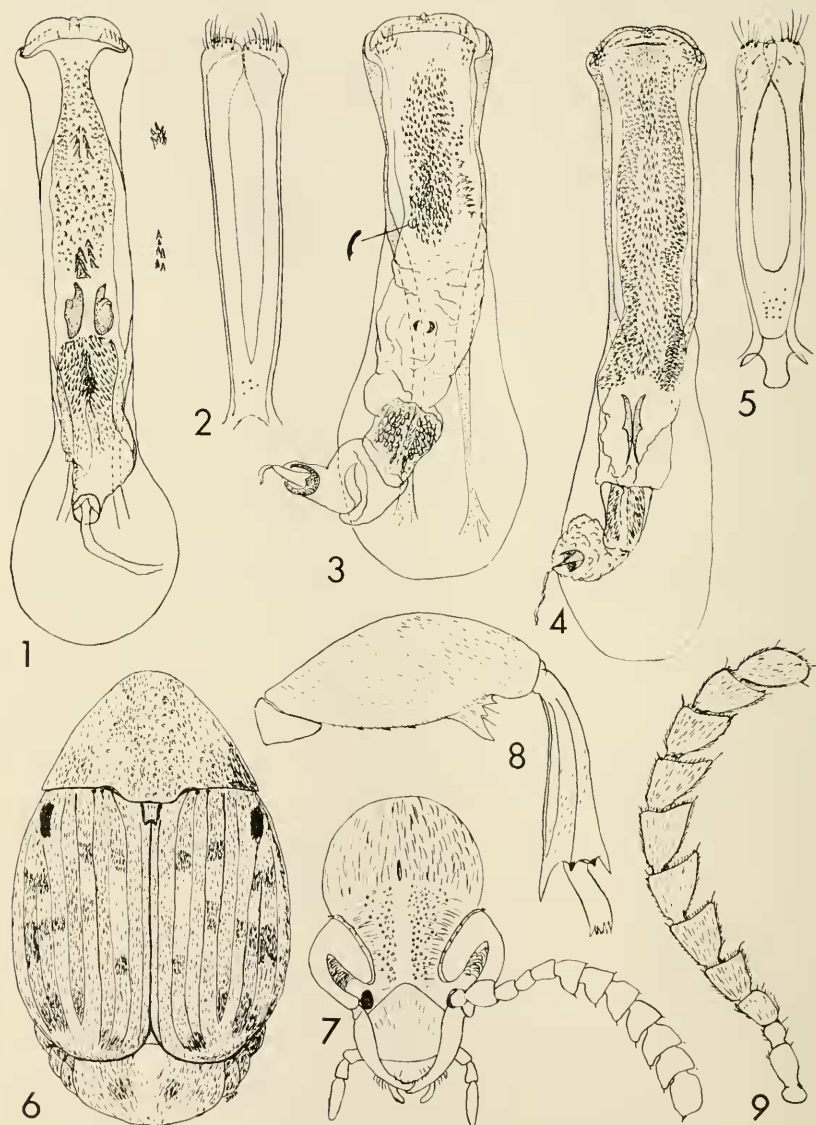
ALLOTYPE (♀) and PARATYPES (♂ and ♀).—Ca. 900 specimens, same data as holotype.

Other localities.—Many specimens intercepted in U.S.D.A. Plant Quarantine inspections in pigeon peas from the following sources: PANAMA: Panama City, Paraiso, Taboga Is.; VENEZUELA; TRINIDAD; CURAÇAO; GUATEMALA; PUERTO RICO; BAHAMAS. One interception from MEXICO in *Rhynchosia pyramidalis* (Lam.) Urb.

Acanthoscelides zeteki belongs to a group of New World species which includes *A. distinguendus* (Horn), *A. ochraceicolor* (Pic) and a number of undetermined or undescribed South American species. Each is somewhat variable in intensity of color and pattern and can be distinguished with certainty only by the excellent characteristics in the male genitalia. These are illustrated for the above three species.

The *Bruchus armitagei* of Bondar (1936) may be any of three presently recognizable species from Brazil closely related to but distinct from *A. zeteki*. In the original description of *A. armitagei*, Pic also describes a variety *semiconjunctus*. Specimens of this variety identified by Pic and kindly loaned to me by Mr. Henry Dybas from the Bondar material in the Field Museum of Natural History in Chicago belong to a different group of species in *Acanthoscelides* than does either *A. zeteki* or *A. armitagei*.

Dr. J. U. McGuire, ARS, USDA, has observed very heavy field populations and storage infestations of *A. zeteki* in Panama. The single record from *Rhynchosia pyramidalis*, the close relationship of *A. zeteki* to other *Rhynchosia*-infesting bruchids, and the close relationship of *Rhynchosia* to *Cajanus* strongly indicate that *A. zeteki* is a native bruchid which transferred to the introduced *Cajanus* and was not introduced with the legume.



Figs. 1-9, *Acanthoscelides* spp. Figs. 1-2, *distinguishendus* (Horn): ♂ 1, median lobe, ventral; 2, lateral lobes, ventral. Fig. 3, *ochraceicolor* (Pic), ♂, median lobe, ventral. Figs. 4-8, *zeteki* n. sp.: 4, median lobe ♂, ventral; 5, lateral lobes, ventral; 6, dorsal habitus; 7, head and antenna, frontal; 8, hind leg, lateral. Fig. 9, *distinguishendus* ♂, antenna.

Acanthoscelides ochraceicolor (Pic)

Bruchus ochraceus Schaeffer 1907, p. 303 (not Baudi, 1886, p. 39 and 61); Cushman, 1911, p. 501.

Bruchus ochraceicolor Pic, 1913, p. 110, new name.

Acanthoscelides ochraceicolor: Blackwelder, 1946, p. 760.

This species is similar in body shape and general color to *A. zeteki* except that the elytra are nearly uniformly yellowish with a very faint pattern. Its average size is smaller than either *A. zeteki* or *A. distinguendus*, with a range of 2.0–2.5 mm. in length.

The geographical range of *A. ochraceicolor* is largely Caribbean and circum-Caribbean.

Localities represented in the U. S. National Museum Collection.—FLORIDA: Paradise Key, Mar. 3, 1919; Marathon, Mar. 21, 1967, in *Galactia striata* (Jusq.) Urban, C. Stegmaier. LOUISIANA: Alexander, Mar. and Sept., 1919, in Spanish Moss, B. R. Coad; Baton Rouge, Sept. 22, Oct. 10, 1922, C. E. Smith; Forbing, Sept. 18, 1907, B. R. Coad; Jeanerette, Oct. 17, 1932, J. B. Thompson; Opelousas, Mar. 12, 1912, B. R. Coad. TEXAS: Brownsville, Feb. 25, 1942, in *Abutilon hypoleucum* A. Gray; Shiller, Mar. 19, 1908, May 1, 1904, Nov. 15, 1950, in *Rhynchosia minima* (L.) DC., D. J. Smith; Columbus, May 19 to Aug. 21, Hubbard and Schwarz; Sugarland, Sept. 7, 1937, L. D. Christenson; Victoria, Jan. 18, 1907, Apr. 2, 1907, Apr. 13, 1911, May 8, 1908, June 22, 1906, June 25, 1911, Aug. 15, 1944, the latter in *Rhynchosia minima*; San Antonio, June 22. MEXICO: Cuernavaca, Mor., Apr. 1945, N.H.L. Krauss; Gutierrez, Aug. 12, 1953, in *Rhynchosia longeracemosa* (Mart. and Gal.), H. Y. Gouldman; Oaxaca, May 13, 1938, R. Greenfield; Tampico, E. A. Schwarz. COSTA RICA: San José, Jan. 30, 1917, in yellow vetch, E. R. Sasscer. COLOMBIA: Apr. 16, 1959, in *Rhynchosia* seed, J. E. Mabry. PERU: Chosica, Nov., 1961, N.H.L. Krauss. GUYANA: Sept. 1, 1947, in pigeon pea. PUERTO RICO: Aguadilla, Jan., 1899, A. Busck, May 4, 1948; Aguirre, Apr. 25–May 3, 1925, H. E. Box; Ensenada, Dec. 1960, M. Beauchamp; Lajas, Sept.-Nov., 1960, M. Beauchamp; Ponce, 1933, R. G. Oakley; San Juan, June 29, 1948. ST. CROIX: Christiansted, Jan. 28–Feb. 22, 1968, in *Rhynchosia minima*, W. H. Pierce; Exp. Sta. Grounds, June 11, 1917, H. E. Morrison; Hamilton Field, Nov., 1950, N.H.L. Krauss. TORTOLA IS.: Apr. 20, 1932, H. Y. Gouldman. ST. JOHN: Cruz Bay, July 10, 1958, M. W. Sanderson. ST. VINCENT: Mar., 1937, S. T. Danforth. GRENADINES: Union Is., Apr., 1937, S. T. Danforth. GRENADA: Pt. Saline, Nov., 1950, N.H.L. Krauss. TRINIDAD: Mar. 8, 1932, in *Eriosema violaceum* (Auble.) E. Meyre, H. Y. Gouldman. JAMAICA: St. Catherine, Guanaboa Vale, Feb. 7, 1960, T. H. Farr; Trelawney, 5 mi. W. Duncans, Feb. 13, 1960, T. H. Farr. BONAIRE: N. Washington, July 26, 1962, J. Maldonado C.; Aruba, July 26, 1962, J. Maldonado C.

***Acanthoscelides distinguendus* (Horn)**

The lectotype designation and synonymy are given by Bottimer (1968).

This species is similar in body shape and elytral pattern to *A. zeteki* and *A. ochraceicolor* but the basic color is piceous instead of reddish. The antennae of *A. distinguendus* are serrate (fig. 9) instead of merely eccentric as in *A. zeteki* (fig. 7). The male genitalia bear consistent characteristics (figs. 1 and 2) distinguishing it from others in the group.

In addition to the Spalding Co., Ga. and Nacogdoches, Tex. localities listed by Bottimer, the following records are in the U. S. National Museum collection.—FLORIDA: Crescent City, April, 1908, Van Duzee; Leon Co., July, 1924, C. O. Handley, in seeds of *Rhynchosia tomentosa* (L.) H. & A. ALABAMA: Marion Co., July 12, 1964, E. U. Balsbaugh. I have seen no specimens from south of the Rio Grande.

***Acanthoscelides armitagei* (Pic)**

Bruchus armitagei Pic, 1931, p. 35.

Acanthoscelides armitagei: Blackwelder, 1946, p. 758.

Acanthoscelides obreptus Bridwell, 1942, p. 256; Kingsolver, 1968, p. 5. **New synonymy.**

Pic lists only "Colombie" in his description. In the series examined from the Pic collection, only one specimen bears a Colombia label, i.e., "Colombia, Honda, 11- 1927, per Dr. F. Zacher, *ex beans*. Imp. Bur. Entom." A label in Pic's handwriting identifies it as this species. I am presuming that this specimen is the holotype although it is not so labeled. In the event that other specimens in this series exist, I designate this specimen lectotype and I have so labeled it.

Acanthoscelides armitagei is found only in *Phaseolus* spp. beans and *Dolichos lablab* L., and its geographic range extends from Mexico to Chile. Illustrations of the male and female genitalia and other diagnostic characteristics are given by Kingsolver (1968).

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**A NEW VELIA FROM PERU, AND THE DESCRIPTION
OF THE MALE OF VELIA HELENÆ HUNGERFORD**
(HEMIPTERA: VELIIDÆ)

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ABSTRACT—The male of *Velia helenæ* Hungerford, found in bromeliads, and a new species, *Velia atra*, are described from Peru.

Through the courtesy of Dr. P. Wygodzinsky of the American Museum of Natural History, I have been permitted to study a small collection of semi-aquatic Hemiptera from South America, which included the veliids treated below.

***Velia helenæ* Hungerford 1929**

Velia helenæ Hungerford, 1929, Ent. Tidskrift 50: 146-147 (Callanga, Peru. Type in Riksmuseum, Stockholm).

This beautiful species was described from a single female, and the male has been unknown. As males are included in the present series, they are described below.

Macropterous male:

Of moderate size; head, thorax and entire venter orange red; beak, antennae, and legs rather uniform deep brown; hemelytra velvety blackish brown, almost black, veins not prominent, each with two large white spots, one near the base and another on membrane; last two genital segments brownish. Pronotum and head sparsely clothed with short decumbent brownish pubescence, longer and denser on lateral margin of pronotum, collar and frons, the latter with 10 to 12 minute conical black setae on each side of midline. Venter sparsely clothed with longer brownish pubescence.